(BSP January 29, 2007)

Elastomeric Concrete

Elastomeric concrete shall be one of the following two products conforming to the following specifications:

Degussa Wabo Crete II

The elastomeric concrete shall be a two component polyurethane combined with a one component manufacturer specified aggregate mixture to form a self-leveling, monolithic mixture capable of forming a monolithic bond to concrete surfaces.

The elastomeric concrete shall conform to the following properties:

<u>Elastomeric Concrete Binder, Cured 7 days at room temperature</u>

Tensile Strength	ASTM D 638	750 psi minimum
Elongation at break	ASTM D 638	200 percent minimum
Type D	ASTM D 2240	30-49
Durometer Hardness		
Compression Set	ASTM D 395	50 percent
	Method B	22 hours at 158F
Tear Resistance	ASTM D 624	80 pounds per inch, minimum
		at 2 inches per minute
Water Absorption	ASTM D 570	3 percent by weight
Heat Shrinkage	ASTM D 1299	1.6 percent maximum
Oven Aging	ASTM D 638	750
		72 hours at 158F
Elongation	ASTM D 638	150 percent minimum

<u>Elastomeric Concrete, Binder and Aggregate Mixture, Fully Cured</u>

Compressive Strength	ASTM D 695	2,200 psi minimum
Resilience	ASTM D 695	90 percent minimum
at 5 percent deflection		
Slant Shear Bond		250 psi minimum
to concrete		
Impact Resistance		
(Ball Drop at 14 days)		
at -20F	ASTM D 3209	No Cracks
at 32F	ASTM D 3209	No Cracks
at 158F	ASTM D 3209	No Cracks
Pot Lift		Ten minutes at 75F

The elastomeric concrete aggregate shall be as specified, gradated, and packaged by the elastomeric concrete manufacturer.

The primer shall be as recommended by the elastomeric concrete manufacturer.

D. S. Brown Delcrete

The elastomeric concrete shall be a two component polyurethane combined with a one component manufacturer specified aggregate mixture to form a self-leveling, monolithic mixture capable of forming a monolithic bond to concrete surfaces.

The elastomeric concrete shall conform to the following properties:

Elastomeric Concrete Binder after conditioning at 100F for 7 days

Tensile strength	ASTM D 638	1,500 psi minimum
Tensile stress	ASTM D 638	500 psi minimum
Elongation	ASTM D 638	200 percent minimum
Type D Durometer hardness	ASTM D 2240	90 ± 3

Elastomeric Concrete Binder after oven aging at 158F for 7 days

Tensile strength	ASTM D 573	1,500 psi minimum
Tensile stress	ASTM D 573	500 psi minimum
Elongation	ASTM D 573	200 percent minimum
Type D Durometer hardness	ASTM D 573	90 ± 3

Elastomeric Concrete Binder and Aggregate Mixture after conditioning at 100F for 7 days

Tensile strength	Note 1	600 psi minimum
Elongation	Note 1	25 percent minimum
Type D Durometer hardness	ASTM D 2240	50 shore D maximum
Compressive stress at 5% deflection	ASTM D 695 and Note 2	800 psi minimum
Resilience at 5 percent deflection	Note 3	70 percent minimum
Impact resistance (Ball drop at -20F)	Note 4	10 foot-pounds minimum with no cracks
Dry bond to conc.	Note 5	350 pounds per inch minimum
Wet bond to conc.	Note 5	250 pounds per inch minimum

Note 1: Six inch dumbbell test specimens (with one inch benchmarks) cut from cast film approximately 80 mils thick.

Note 2: Two inch cast cube test specimen. Machine crosshead speed is 0.05 inch per minute. Compressive strength is the maximum load carried by the specimen divided by the original cross-section area. A compressometer is used to make the measurement.

Note 3: Two inch cast cube test specimen. Machine cross head speed is 0.05 inch per minute. Specimen is compressed to the desired amount. Five minutes after the load is removed, the specimen thickness is measured. Percent recovery is determined as follows:

(Deflection + final thickness - initial thickness) / Deflection

Note 4: 2-1/2 inch diameter, 3/8 inch thick, cast disk. Specimens are conditioned four hours at test temperatures. A one pound steel ball is dropped onto the center of the specimen through a plastic guiding

tube from an initial height of five feet. The drop is made within ten seconds after removal of the specimen from the exposure condition. The test result is the average of four test specimens.

Note 5: A mortar-briquette half, conforming to ASTM C 190, is sawed in half so that the cut surface area equals approximately one square inch. The cut surface is abrasive blasted (36 mesh). The briquette is placed in a mold and the elastomeric concrete/aggregate mixture is cast against it. The specimen is submerged in water for seven days at room temperature. Using a Rehle Briquette Tester, specimen failure is considered to occur at either the bond interface or within one of the two materials.

The elastomeric concrete aggregate shall be as specified, gradated, and packaged by the elastomeric concrete manufacturer.

The primer shall be as recommended by the elastomeric concrete manufacturer.

The Contractor shall deliver the elastomeric concrete components to the job site in the elastomeric concrete manufacturer's original sealed containers. Each container shall be marked with the sealant manufacturer's name and lot or batch number. Each lot or batch shall be accompanied by the manufacturer's Materials Safety Data Sheet (MSDS), and Certificate of Compliance, identifying the elastomeric concrete manufacturer and the lot or batch number, and certifying that the materials conform to the specified requirements.